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REMARKS

Presently, claims 1-44 are pending in the application. Claims 4, 9, 14, 29, 30, 33, 39, 43 and 44 are withdrawn from consideration without prejudice or disclaimer to the subject matter contained therein. Independent claims 31, 38 and 40-42 have been amended to more particularly point out the present invention and correct formal errors noted by Applicant. Support for the amendments to independent claims 31, 38 and 40-42 may be found, for example, in original claims 1-9. Accordingly, no new matter has been added by the foregoing amendments.

Election/Restrictions

The Examiner has required restriction between the claims of Group I, drawn to determining a bit rate profile (claims 1-3, 5-8, 10-13, 15-28, 31-32, 34-38 and 40-42); Group II, drawn to a statistical multiplexer (claim 43); and Group III, drawn to an advertisement insertion server (claim 44). The Examiner contends that the inventions of Groups I, II and III are distinct from each other.

During a teleconference with the Examiner on July 26, 2005, Applicant provisionally elected to prosecute the invention of Group I. Applicant hereby affirms the election of Group I (claims 1-3, 5-8, 10-13, 15-28, 31-32, 34-38 and 40-42).

As a result of the Election Requirement dated November 2, 2004, claims 4, 14, 29, 30, 33 and 39 have been withdrawn from consideration. Claim 9, which depends from claim 4, was inadvertently not identified as belonging to the non-elected species corresponding to claim 4, and, therefore, was not withdrawn at that time. Claim 9 is therefore withdrawn herein. As a result of the present Restriction Requirement, claims 43 and 44 are withdrawn.

Claim Objection

The Examiner has objected to claim 9 as depending from a withdrawn claim (claim 4). Applicant has withdrawn Claim 9 herein. Reconsideration and withdrawal of the Examiner's objection to claim 9 are respectfully requested.

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Prior Art Rejection – 35 U.S.C 102(e)

The Examiner has rejected claims 1-3, 5, 17, 19, 21, 32 and 34 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,529,555 to Tahara *et al.* ("Tahara"). The Examiner contends that Tahara teaches all elements of these claims. For the reasons stated below, Applicant respectfully traverses this rejection.

Applicant respectfully points out that many of the Examiner's arguments as set forth in the present Office Action with respect to prior art rejections of the claims appear to be misstated. For example, in numerous instances the Examiner has rejected dependent claims over a reference (e.g., Tahara), where the independent claim from which the relevant claim(s) depend has not also been similarly rejected. In addition, in rejecting both independent and dependent claims, the Examiner has repeatedly articulated arguments that were previously applied to different claims that recite different claim language. Applicant has not specifically addressed each of the Examiner's arguments and misstatements with respect to the specific claims for which those arguments and are made. However, to the extent that such arguments are nonetheless applied to the currently pending claims, Applicant respectfully traverses the rejections and corresponding arguments in support of those rejections made by the Examiner, and for the reasons set forth herein, Applicant respectfully submits that all of the presently pending claims, as amended, are allowable over the Examiner's rejections.

Tahara discloses a system for seamlessly splicing two encoded video streams. Tahara addresses how to match field and frame patterns of a replacement video stream with those of another live video stream so the original stream can be replaced without discontinuity (column 7, lines 25-28). In the embodiment cited by the Examiner, a target bit rate is calculated for a stream that is to be inserted. The target bit rate is a function of the difficulty data supplied by video encoders for all of the video streams in a transmission. (column 12, lines 35-60). This is done "dynamically." (column 12, line 59). Thus, there is no computation of a profile of target bit rates. Rather a dynamic target is created picture by picture for compression on the fly. Tahara therefore does not disclose an analysis of a video stream and creation of a bit rate profile from that stream for use in compressing a stream to be inserted.

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Applicant's invention is directed to a system and method for inserting video streams into statistically-multiplexed video streams containing multiple video programs, by computing a rate profile for compression of the inserted video stream. A rate profile is applicable to bit rates over time of a video stream. By creating a rate profile for compression of the inserted video stream, Applicant's invention addresses the fact that programs have time varying bandwidth.

For a rejection under § 102(e) to be proper, a reference must disclose, either explicitly or inherently, each and every element of the claimed invention. Applicant respectfully submits that Tahara does not teach each and every element recited in independent claim1.

Independent claim 1 recites (with emphasis added):

> A method for inserting a digital media advertisement in a digital multiplexed stream, the method comprising:
>
> computing a rate profile associated with a program stream;
>
> compressing the digital media advertisement according to the computed rate profile; and
>
> inserting the compressed digital media advertisement in the digital multiplexed stream at an advertising opportunity in the program stream.

Tahara does not disclose computation of a bit rate profile or adapting programming to a bit rate profile, since Tahara only teaches matching of video stream syntax and an on-the-fly compression of a replacement stream based on difficulty data.

Regarding the Examiner's rejection of claims 1 and 17, the Examiner cites Tahara (column 12, lines 35-40) for the proposition that Tahara "computes a rate profile associated with a stream." However, since this citation relates to a discussion of a typical MPEG encoder, there is no disclosure that a "rate profile" is calculated. Rather, "target bit rates" based on "difficulty data output from the video encoders" are calculated (column 12, lines 35-44). Thus, there is no suggestion of a bit rate profile being calculated over time, since Tahara's system is limited to an analysis of one picture at a time. Additionally, in the discussion of claims 2 and 32, the Examiner cites the same

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passage for the proposition that Tahara discloses a "predetermined bit rate" (see page 4 of the Office Action). If the passage indeed refers to a predetermined bit rate, then such a rate is clearly not a bit rate "profile" based on an analysis of a time-varying bit rate in a video stream. The Examiner further cites Tahara (column 23, line 55 – column 24, line 10) for the proposition that Tahara discloses "compressing the digital media advertisement according to the computed rate profile." The cited passage does not disclose computation of a rate profile or compression based on a rate profile. As explained above, Tahara discloses an on-the-fly encoding based on a picture-by-picture coding difficulty signal (column 23, lines 63-65). Thus, there is no disclosure or suggestion in Tahara that a bit rate profile is computed from a program stream, and then used to compress a digital media advertisement for insertion into that program stream. Accordingly, Tahara does not disclose all of the features of independent claim 1.

Independent claim 16 recites "a rate profile monitor for monitoring a rate profile associated with a program stream." For the same reasons discussed above with respect to independent claim 1, Tahara does not disclose a rate profile monitor and/or monitoring a rate profile of a program stream. As such, Tahara does not disclose all of the features recited in independent claim 16.

Independent claim 31, as amended, recites "defining an advertising bit rate profile for an advertising opportunity." For the same reasons cited above with respect to independent claim 1, Tahara does not disclose defining an advertising bit rate profile. As such, Tahara does not disclose all of the features recited in independent claim 31.

Claims 2-3, 5, 17, 19, 21, 32 and 34 are allowable at least by their dependency on independent claims 1, 16 and 31, respectively. Reconsideration and withdrawal of the Examiner's rejection of claims 1-3, 5, 17, 19, 21, 32 and 34 are respectfully requested.

Prior Art Rejections – 35 U.S.C. 103(a)

The Examiner has rejected Claims 6-7, 22 and 35 under 35 U.S.C. 103(a) as being unpatentable over Tahara. Applicant respectfully traverses this rejection.

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For the same reasons discussed above with respect to the Examiner's anticipation rejection of claims 1-3, 5, 17, 19, 21, 32 and 34, Tahara does not teach or suggest all of the elements of independent claims 1, 16 and 31. Accordingly, claims 1, 16 and 31 are believed to be allowable over Tahara.

With respect to claim 6, the Examiner has taken Official Notice that "it would have been obvious for the rate profile to include insertion instructions," contending that "doing so would have been obvious in order to obtain a correctly formatted output stream" (see page 4 of the Office Action). Tahara, however, does not disclose rate profiles including insertion instructions. Thus, the inclusion of insertion instructions is not necessary "to obtain a correctly formatted output stream," as asserted by the Examiner. As such, the Examiner's proposed modification of Tahara is improper because there is no motivation to include insertion instructions. Moreover, Applicant disagrees that there are "facts outside of the record which are capable of instant and unquestionable demonstration as being 'well-known' in the art," as required by M.P.E.P. §2144.03, which would support an Examiner's finding of Official Notice.

Applicant respectfully traverses the Examiner's taking of Official Notice, and respectfully requests that the Examiner support the taking of Official Notice by producing a relevant reference that shows/teaches a rate profile that includes insertion instructions, and that the Examiner identify a specific teaching in the reference to support such a combination with Tahara.

Dependent claims 6-7, 22 and 35 are allowable at least by their dependency on independent claims 1, 16 and 31, respectively. Reconsideration and withdrawal of the Examiner's rejection of claims 6-7, 22 and 35 are respectfully requested.

The Examiner has rejected claims 8, 23 and 36 as being unpatentable over Tahara in view of U.S. Patent No. 6,208,688 to Seo et al. ("Seo"). The Examiner asserts that that Seo teaches a piecewise linear model and concludes that it would have been obvious at the time of the present invention to combine Seo with the apparatus disclosed in Tahara, in order to "obtain an apparatus that obtains the highest possible picture quality." Applicant respectfully traverses this rejection.

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For the same reasons discussed above with respect to the Examiner's anticipation rejection of claims 1-3, 5, 17, 19, 21, 32 and 34, Tahara does not teach or suggest all of the elements of independent claims 1, 16 and 31. Applicant respectfully submits that Seo does not teach or suggest the elements missing from Tahara. Accordingly, independent claims 1, 16 and 31 are believed to be allowable over the combination of Tahara and Seo. Dependent claims 8, 23 and 36 are allowable at least by their dependency on independent claims 1, 16 and 31, respectively. Reconsideration and withdrawal of the Examiner's rejection of claims 8, 23 and 36 are respectfully requested.

The Examiner has rejected claims 9-13, 15-16, 18, 20, 24-28, 31, 37-38 and 40-42 under 35 U.S.C. 103(a) as being unpatentable over Tahara in view of U.S. Patent No. 6,611,624 to Zhang *et al.* ("Zhang"). It appears, however, that the Examiner has relied on Zhang only for the rejection of claims 9, 24 and 37.

Regarding independent claim 10, the Examiner has referred only to the rejection of claim 1 and asserts that "Tahara discloses determining a second bit rate profile for a second advertising opportunity." Claim 10 recites, "specifying a predetermined bit rate profile for compression of a first advertisement and a second advertisement, wherein the predetermined bit rate profile provides a limit to the sum of the first bit rate profile and the second bit rate profile." The cited passage of Tahara only refers to typical statistical multiplexing of more than one video signal. There is no use of a rate profile in the cited passage. Thus, Tahara does not disclose using a single bit rate profile to limit the sum of a first bit rate profile and a second bit rate profile. Moreover, as discussed above with respect to independent claim 1, Tahara does not disclose the use of any bit rate profile or the computation thereof. Accordingly, Tahara does not teach or suggest all of the features of independent claim 10. Zhang does not teach or suggest these missing elements. Therefore, independent claim 10 is believed to be allowable over the combination of Tahara and Zhang.

With respect to independent claim 16, the Examiner asserts that "Tahara discloses 'a rate profile monitor for monitoring a rate profile.'" However, the rate monitored in Tahara is the rate of the stream being encoded. As such, there is no monitoring of a program stream to create a rate profile to be applied to a digital media advertisement that is to be inserted in the multiplexed stream, as recited in independent claim 16 (see

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column 12, lines 59-67 of Tahara). Additionally, Tahara does not teach or suggest all of the elements recited in independent claim 16 for the same reasons discussed above with respect to the Examiner's anticipation rejection of claims 1-3, 5, 17, 19, 21, 32 and 34. Applicant respectfully submits that Zhang does not teach or suggest the elements missing from Tahara. Accordingly, independent claim 16 is believed to be allowable over the combination of Tahara and Zhang.

     With respect to independent claim 25, the Examiner asserts that Tahara discloses "encoding the advertisements <u>at an aggregate bit rate profile</u> which is less than or equal to the sum of the first and second profiles," referring to the remarks regarding claim 10. As discussed above with respect to independent claim 10, Tahara does not disclose the use of a single rate profile to limit the sum of a first and second profile. Accordingly, Tahara does not teach or suggest all of the features of independent claim 25. Applicant respectfully submits that Zhang does not teach or suggest the elements missing from Tahara. Accordingly, independent claim 25 is believed to be allowable over the combination of Tahara and Zhang.

     Claim 31 does not refer to use of a single rate profile to limit the sum of a first bit rate profile and a second bit rate profile. Accordingly, the Examiner's remarks regarding claim 31 are inapposite. As discussed above with respect to the Examiner's anticipation rejection, independent claim 31, as amended, recites "defining <u>an advertising bit rate profile</u> for an advertising opportunity." For the same reasons discussed above with respect to independent claim 1, Tahara does not disclose defining an advertising bit rate profile. As such, Tahara does not disclose all of the features recited in independent claim 31. Applicant respectfully submits that Zhang does not teach or suggest the elements missing from Tahara. Accordingly, independent claim 31 is believed to be allowable over the combination of Tahara and Zhang.

     With respect to independent claims 38 and 40-42, the Examiner cites the same arguments made with respect independent claim 1. However, independent claim 38 recites "an advertisement insertion server capable of serving an ad <u>according to a bit rate profile</u> compatible with the available bandwidth." Independent claim 40 recites, "an advertisement insertion unit...capable of forcing an advertisement to run <u>according to a bit rate profile</u> therefore ensuring that a minimum bit rate will be maintained."

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Independent claim 41 recites, "an advertisement insertion server capable of limiting the bandwidth of served advertisements to a bit rate profile therefore ensuring that the advertisement does not exceed a maximum bit rate." Independent claim 42 recites, "an advertisement insertion unit...capable of limiting the bit rate of a served digital video advertisement according to a bit rate profile thereby ensuring that a maximum bit rate is not exceeded." As explained above with respect to the Examiner's rejection of claim 1, Tahara does not disclose the use or computation of a rate profile, and therefore does not teach or suggest the use of a bit rate profile to limit the bit rate of a served advertisement. Therefore, for the reasons discussed above with respect to independent claim 1, Tahara fails to teach or suggest all of the elements of independent claims 38 and 40-42. Applicant respectfully submits that Zhang does not teach or suggest the elements missing from Tahara. Further, the Examiner has not supported any possible assertion that the missing elements relating to a rate profile would have been obvious to one skilled in the art in view of Tahara, or that there would have been motivation to combine the teachings of Zhang with Tahara to result in Applicant's claimed invention. Accordingly, independent claims 38 and 40-42 are believed to be allowable over the combination of Tahara and Zhang.

With respect to dependent claims 12 and 27, the Examiner has taken Official Notice that "it would have been obvious for the profile to supply the instantaneous sum of the first and second bit profile...in order to make the apparatus operate more efficiently by already knowing the sum of the bit rates instead of calculating them" (see page 6 of the Office Action). However, Applicant disagrees that there are "facts outside of the record which are capable of instant and unquestionable demonstration as being 'well-known' in the art," as required by M.P.E.P. §2144.03, which would support an Examiner's finding of Official Notice.

Applicant respectfully traverses the Examiner's taking of Official Notice, and respectfully requests that the Examiner support the taking of Official Notice by producing a relevant reference that shows/teaches a rate profile that includes insertion instructions, and that the Examiner identify a specific teaching in the reference to support such a combination with Tahara and/or Zhang.

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Dependent claims 11-13, 15, 18, 20, 24-28 and 37 are allowable at least by their dependency on independent claims 10, 16, 25 and 31, respectively. Claim 9 has been withdrawn. Reconsideration and withdrawal of the Examiner's rejection of claims 9-13, 15-16, 18, 20, 24-28, 31, 37-38 and 40-42 are respectfully requested.

Conclusion

In view of the foregoing remarks, Applicant respectfully submits that the Examiner's objection and rejections have been overcome, and that the application, including claims 1-3, 5-8, 10-13, 15-28, 31-32, 34-38 and 40-42 is in condition for allowance. Reconsideration and withdrawal of the Examiner's objection and rejections and an early Notice of Allowance are respectfully requested.

Respectfully submitted,

Date: ___12/9/05___　　　　By: _____
　　　　　　　　　　　　　　　Andrew W. Spicer
　　　　　　　　　　　　　　　Registration No. 57,420
　　　　　　　　　　　　　　　Technology, Patents, & Licensing, Inc.
　　　　　　　　　　　　　　　6206 Kellers Church Road
　　　　　　　　　　　　　　　Pipersville, PA 18947
　　　　　　　　　　　　　　　Telephone: 215-766-2100
　　　　　　　　　　　　　　　Facsimile: 215-766-2920

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